DIF 10.3 backwards compatibility with 10.2

Requirement

Providers with existing DIF-10.2 metadata will not have to make changes to their metadata when we implement DIF-10.3 fie.

Background

Changes were made to DIF-10.3 Distribution, Access_Contraints, and Use_Constraints to support UMM-C compatibility. Providers with existing DIF-10.2 metadata may experience XML errors if their metadata is populated with DIF-10.2 fields.

DIF-10.2: Distribution

<Distribution>
<Distribution_Size>**Distribution_Size1**</Distribution_Size>
<Distribution_Format>Distribution_Format1</Distribution_Format>
<Fees>Fees1</Fees>
</Distribution>

DIF-10.3: Distribution

<Distribution>
<Distribution_Media>Distribution_Media0</Distribution_Media>
<Average_Granule_Size>Average_Granule_Size0</Average_Granule_Size>
<Average_Granule_Size_Unit>KB</Average_Granule_Size_Unit>
<Total_Collection_Size>Total_Collection_Size0</Total_Collection_Size>
<Total_Collection_Size_Unit>KB</Total_Collection_Size_Unit>
.
.
.
</Distribution>

DIF-10.2: Access_Constraints:

<Access_Constraints>Access_Constraints0</Access_Constraints>

DIF-10.3 Access_Constraints:

<Access_Constraints>
<Description>Description29</Description>
<Access_Control>128</Access_Control>
<Access_Control_Description>AccessContDescription0</Access_Control_Description>
</Access_Constraints>

DIF-10.2: Use_Constraints:

<Use_Constraints>Use_Constraints0</Use_Constraints>

DIF-10.3: Use_Constraints:

<Use_Constraints>
<Description>Description30</Description>
<License_URL>....</License_URL>
<License_Text>License_Text0</License_Text>
</Use_Constraints>

Solution 1

CMR to support multiple versions of DIF-10 (10.2, 10.3, ...)

The Good

- Providers with existing DIF-10.2 metadata will not have to make any immediate changes to their metadata.
- Providers can move to DIF-10.3 over time.

The Bad

- CMR will have to support translations in the backend between multiple DIF formats and UMM-C.

Solution 2

MDQ Changes DIF-10.2 to allow DIF-10.3 fields

The Good

- Providers with existing DIF-10.2 metadata will not have to make any immediate changes to their metadata.
- CMR will only have to support a single version of DIF-10.
- CMR will only have to support one mapping between DIF-10 and UMM-C.
- CMR won't have to update their API, if users use new fields.

The Bad

- More difficult to keep the DIF and UMM-C insync as we will have to continue to support legacy fields that are inconsistent UMM-C.
- The CMR will have to add code to see which fields are being used and parse the appropriate ones.
- Confusing schema
    - Example 1
        - Access_Constraints description information will appear as a string DIF/Access_Constraints/<Text> (DIF-10.2 legacy) which is confusing since there is a DIF/Access_Constraints/Description (DIF-10.3).
        - Use_Constraints description information will appear as a string DIF/Use_Constraints/<Text> (DIF-10.2 legacy) which is confusing since there is already a DIF/Use_Constraints/Description (DIF-10.3).
    - Example 2
        - Redundancy since DIF/Distribution_Size (DIF-10.2 legacy field) was replaced by the following UMM-C fields in DIF-10.3:
            - Average_Granule_Size
            - Average_Granule_Size_Unit
            - Total_Collection_Size
            - Total_Collection_Size_Unit